Compatible 3G USB modems*3

Brand	Model
Huawei	E220
Huawei	E270
BandRich	Bandluxe C100

This list will be continuously updated at http://www.billion.com/compatible-3G.html.

Benefits

Communication Flexibility via 3G/HSDPA using the USB port

The BiPAC 7402X series allows you to connect a 3G/HSDPA USB modem to its built-in USB port, enabling you to use a 3G/HSDPA, UMTS, EDGE, GPRS, or GSM Internet connection, makes downstream rates of up to 14.4Mbps*3 possible. With the increasing popularity of the 3G standard, communication via the BiPAC 7402X series is becoming more convenient and widely available - allowing you to watch movies, download music on the road, or access e-mail no matter where you are. You can even share your Internet connection with others, no matter if you're in a meeting, or speeding across the country on a train.

Always Online

The BiPAC 7402X series is compliant with worldwide ADSL standards, and supports download rates of up to 12/24Mbps using ADSL2/2+, 8Mbps using ADSL and an upload rate of up to 1Mbps. Using this technology you'll be able to enjoy high-speed ADSL and broadband multimedia applications such as interactive gaming, video streaming and real-time audio. The integrated Annex M standard supports ADSL2/2+ for higher upload speeds by doubling the upload data rate. Planned support for auto-failover means that you'll be assured of a constant Internet connection – in case your ADSL line fails, the BiPAC 7402X series will connect via 3G to deliver uninterrupted connectivity.

Double-layer Protection

An integrated 802.11g Wireless Access Point offers quick yet easy access with data encryption for added security. Wireless Protected Access (WPA-PSK/WPA2-PSK) and Wireless Encryption Protocol (WEP) support ensures high-level data protection and WLAN access control. In addition, rich firewall security features such as SPI, DoS attack prevention and URL content filtering are integrated to provide unparalleled protection for Internet access. Enjoy the benefits of added security by simply pressing the Wi-Fi Protected Setup button to quickly and easily set up secure wireless communication. If your network requires wider coverage, the built-in Wireless Distribution System (WDS) repeater function allows you to expand the wireless network without the need for using any wires.

Secure VPN connections

The BiPAC 7402X series supports embedded IPSec VPN (Virtual Private Network) protocols, allowing users to establish encrypted private connections of up to 16 simultaneous tunnels over the Internet. With a built-in DES/3DES VPN accelerator, the router enhances IPSec VPN performance significantly and ensures that data is transmitted securely between two or more sites.

Features & Specifications

ADSL Compliance

- Compliant with ADSL Standard
  - Full-rate ANSI T1.413 Issue 2
  - G.dmt (ITU G.992.1)
  - G.lite (ITU G.992.2)
  - G.hs (ITU G.994.1)
  - ADSL over ISDN/U-R2
- Compliant with ADSL2 Standard
  - G.dmt.bis (ITU G.992.3)
  - ADSL2 Annex M (ITU G.992.3 Annex M) (Available on BiPAC 7402X series -A)
- Compliant with ADSL2+ Standard
  - G.dmt.bisplus (ITU G.992.5)
  - ADSL2+ Annex M (ITU G.992.5 Annex M) (Available on BiPAC 7402X series -A)

Network Protocols and Features

- NAT, static routing and RIP-1/2
- Universal Plug-and-Play (UPnP) Compliant
- Dynamic Domain Name System (DDNS)
- Virtual Server and DMZ
- SNTP, DNS relay, IGMP Proxy
- POP3 (email account checking)
- IGMP Snooping for video services

Virtual Private Network (VPN)

- 16 IPSec VPN Tunnels
  8 L2TP VPN Tunnels (Dial-in: 4, Dial-out: 4)
  8 PPTP VPN Tunnels (Dial-in: 4, Dial-out: 4)
- Embedded IPSec, L2TP & PPTP client/server
- IKE key management
- DES, 3DES and AES encryption for IPSec
- Embedded powerful 3DES accelerator
- MPPE Encryption for PPTP
- L2TP over IPSec
- L2TP/PPTP/IPSec pass-through

Management

- Quick Installation Wizard and Auto ADSL settings
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload and download via web-based GUI
- Embedded Telnet server for remote and local management
- Available Syslog monitoring
- SNMP v3, MIB-I and MIB-II support
- Supports DHCP server/client/relay
- Supports Remote Management*1
- TR-069*1

Wireless 802.11g

- Compliant with IEEE 802.11g and 802.11b standards
- 2.4GHz - 2.484GHz frequency range
- Up to 54Mbps wireless operation rate
- 64-/128-bit WEP supported for encryption
- Wireless Security with WPA-PSK/WPA2-PSK support
- Wireless Distribution System (WDS) repeater function support
- Wi-Fi Protected Setup

IPTV Application*4

- IGMP Snooping
- Virtual LAN (VLAN)
- Quality of Service (QoS)

ATM and PPP Protocols

- ATM Adaptation Layer Type 5 (AAL5)
- Multiple protocols over AAL5 (RFC 2684, formerly RFC 1483)
- Bridged or routed Ethernet encapsulation
- VC and LLC based multiplexing
- PPP over Ethernet (PPPoE)
- PPP over ATM (RFC 2364)
- Classical IP over ATM (RFC 1577)
- MAC Encapsulated Routing (RFC 1483 MER)
- OAM F4/F5

Operating Environment

- Operating temperature: 0 - 40°C
- Storage temperature: -20 - 70°C
- Humidity: 20 - 95% non-condensing

Quality of Service Control

- Supports DiffServ approach
- Traffic prioritization and bandwidth management based-on IP protocol, port number and address

Firewall

- Built-in NAT firewall
- Stateful Packet Inspection (SPI)
- Prevent DoS attacks including IP Spoofing, Land Attack,Smurf Attack, Ping of Death, TCP SYN Flooding, etc.
- Packet Filtering – port, source IP address, destination IP address, MAC address
- URL Content Filtering – string or domain name detection in URL string

Hardware Specifications

Physical Interface
- WLAN: one 2 dBi detachable antenna
- DSL: ADSL Port
- Ethernet: 4-port 10/100Mbps auto MDI/MDI-X Switch
- USB 2.0 supports 3G/HSDPA modem backup
- Console: the Ethernet Port # 4 can be also connected to console
- WPS button: for WPS Push Button Configuration
- Factory default reset button
- Power jack
- Power switch

Physical Specifications
- Dimensions: 7.28" x 4.86" x 1.42" (185mm x 123.5mm x 36mm)

Power Requirements
- Input:12V DC, 1.2A
- Car power cable available separately*6

Models & Standards Supported

Product Models
- BiPAC 7402X 3G/ADSL2+ VPN Firewall Router
- BiPAC 7402XL 3G/ADSL2+ Firewall Router
- BiPAC 7402GX 3G/ADSL2+ Wireless VPN Firewall Router
- BiPAC 7402GXL 3G/ADSL2+ Wireless Firewall Router

Standards
- BiPAC 7402X series -A: Annex A & Annex M
- BiPAC 7402X series -U: Annex B & U-R2
- Annex A and Annex M: ADSL over POTS
- Annex B and Annex U-R2: ADSL over ISDN

*Notes:
1. On request for Telco/ISP projects
2. The router may require firmware modification for certain ADSL2/2+/ Annex M DSLAMs.
3. The 3G/HSDPA data rate is dependent on your local service provider and your 3G/HSDPA modem.
4. IPTV applications may require subscribing to IPTV services from a Telco/ISP.
5. Specifications in this datasheet are subject to change without prior notice.
6. The car power cable can be made available as an optional accessory upon request.

V.070208

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BILLION

Stay Connected & Secure on-the-go

Applications over 3G/ADSL networks

- ✓ Anytime connection
- ✓ On public transport
- ✓ In a meeting
- ✓ At an event
- ✓ At the desk
- ✓ VPN Security

BiPAC 7402X series

3G/ADSL2+ (802.11g)
VPN Firewall Router with USB 2.0 port

- 3G/ADSL for true always-on connectivity
- Mobility assured by 3G support
- Automatically switch between ADSL and 3G as needed
- VPN security

3G/ADSL2+ (802.11g) VPN Firewall Router with USB 2.0 port

Model	Wireless 802.11g	IPSec VPN	USB Port for 3G	Auto Fail-over
BiPAC 7402X	-	✓	✓	✓
BiPAC 7402XL	-	-	✓	✓
BiPAC 7402GXL	✓	-	✓	✓
BiPAC 7402GX	✓	✓	✓	✓

Create your own portable hotspot! Enjoy the freedom of secure, high-speed Internet connectivity at the home, office, or while on the road with Billion's compact BiPAC 7402X series dual-interface ADSL2+/3G firewall router. Wired connections can benefit from the ADSL2+ standard's flexibility, offering download speeds of up to 24Mbps using a standard telephone connection, while wireless connections profit from download speeds up to 14.4Mbps*3 delivered via 3G/HSDPA, EDGE, UMTS or GPRS networks.

The BiPAC 7402X series is equipped with a built-in 4-port full-duplex 10/100 Switch to allow easy connecting of other wired-Ethernet devices. Directly connect up to four PCs, or additional hubs or switches to create a larger network as needed. Use the integrated Router function and a USB port to share a blistering ADSL2+ or 3G-based Internet connection (requires an additional 3G USB modem), with automatic fail-over to ensure an always-on Internet connection in the event that one of your Internet services fails.

The BiPAC 7402X series can also encode all 802.11g wireless LAN transmissions with either WEP or WPA encryption to ensure that your data is protected, and boasts a DHCP Server and a powerful SPI firewall to protect against intruders and most known Internet attacks. Secure WLAN setup is simplified by the web browser-based configuration for easy access to the Internet wherever a 3G connection is available - whether you're seated at your desk or taking a cross-country train trip.

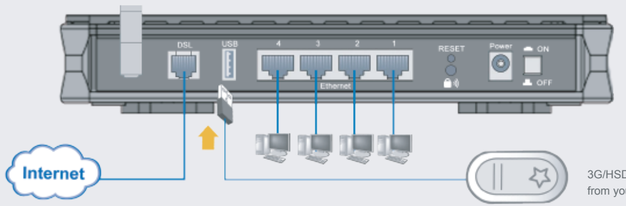
Key Features

- Dual WAN interfaces for ADSL2+ and 3G connections
- Auto fail-over feature to ensure an always-on connection
- High-speed Internet access with ADSL2/2+; backward compatible with ADSL
- USB 2.0 port for plugging a 3G/HSDPA modem as backup (Available from your service provider)
- 802.11g Wireless AP with WPA-PSK/WPA2-PSK support
- Wi-Fi Protected Setup feature makes setting up a secure network quick and easy
- Supports 16 IPSec Virtual Private Network (VPN) tunnels
- SOHO firewall security with DoS prevention and SPI
- Secured VPN with powerful DES/3DES/AES
- Quality of Service control
- Syslog Monitoring
- Supports IPTV Applications*4

Ideal for:

- home users
- office users
- event or meeting organizers

Applications over 3G/ADSL networks

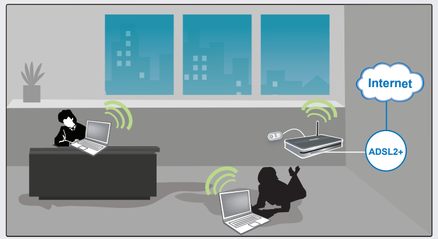


3G/HSDPA modem available from your service providers

What is 3G?

3G is the common name for third-generation digital mobile technology. It offers consistent connectivity services delivered via 3G/HSDPA, EDGE, or UMTS mobile telephony protocols.

Compared to 1G (analog wireless technology) and 2G (digital radio wireless technology such as GPRS), 3G offers faster data transfer rates up to 14.4Mbps*1



At the desk

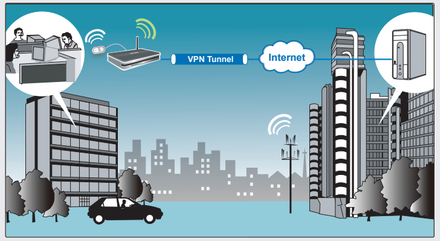
Enjoy all the benefits of a high-speed ADSL connection right at your desk with the BiPAC 7402X series, offering a secure computing experience, with an integrated SPI firewall, DoS prevention and other robust security features.

Always-On connection

The auto fail-over feature ensures maximum connectivity and minimum interruption by quickly and smoothly connecting to a 3G network in the event that the landline fails. The BiPAC 7402X series will then automatically return to the ADSL connection when it's restored, reducing connection costs. These features are perfect for office situations where a constant connection is paramount.

In a meeting

The BiPAC 7402X's innovative browser-based configuration allows you to quickly and easily set up a WLAN, so when you're at a meeting or training, your guests or participants can quickly and securely access the Internet via a 3G network to retrieve emails, share meeting minutes or training materials with their colleagues.



VPN security

The integrated IPSec VPN function allows you to establish encrypted connections of up to 16 VPN tunnels over the Internet - so you can access your corporate intranet and transmit sensitive data between branch offices and remote sites anytime; even when you are on the road, thus enhancing productivity.

On public transport

By installing the BiPAC 7402X series, public transport operators can update passengers with real-time weather and event information, updated regularly via a 3G Internet connection, or offer business travelers Internet access that can be billed to create greater income potential. The car power cable*5 provides you with a power supply to the router whilst in the car.

At an event

When you're chilling out at a party or concert, the light-weight, portable BiPAC 7402X series frees you to instantly share your pictures or video clips of the event with friends and family -- so those close to you can share your joy.